

R E M A R K S

Statement of Common Ownership

Applicants' undersigned attorney of record hereby states that the above-identified application No. 09/845,449, and the U.S. patent application identified by publication No. 2002/0192580 A1 were, at the time the invention of application No. 09/845,449 was made, owned by Ricoh Company, Ltd.

Introduction

In response to the objection to the disclosure set forth in numbered paragraph 4 on p. 3 of the aforementioned Office Action, the specification has been corrected by replacing the paragraph beginning at p. 7, line 26, so as to change "cyan" (at p. 7, line 27) to "magenta."

One new claim (25) has been added. This claim, dependent on claim 1, recites all the limitations of each of claims 2 - 7 and is, therefore, directed to the combination of all those limitations with each other and with the limitations of claim 1. Since this Amendment does not increase either the total number of claims or the number of independent claims beyond that previously paid for, no additional fee is necessary.

Claims 1 (independent), 2 - 7 (dependent) and 25 (new; dependent) are in the application. No claim has been allowed.

Response to Rejections

In response to the rejection of claims 1 - 7 under 35 U.S.C. §103(a) as unpatentable over Elsermans combined with U.S. Patent Application Publication No. 2000/0192580 (Kuramoto '580),

applicants respectfully direct attention to the Statement of Common Ownership set forth above. Kuramoto '580 is applied in the rejection as a §102(e)/§103(a) reference. The present application was filed April 30, 2001; it and Kuramoto '580 were commonly owned at the time the invention herein claimed was made. Therefore, pursuant to 35 U.S.C. §103(c), Kuramoto '580 is disqualified as prior art against the instant claims. See M.P.E.P. §706.02(1)(1) and (2). Since Kuramoto '580 is necessary to the stated ground of rejection (on Elsermans combined with Kuramoto '580), that ground of rejection is overcome as to all of claims 1 - 7, and is likewise inapplicable to new claim 25.

Referring to numbered paragraph 13 on p. 18 of the Office Action, applicants note that the asserted "cumulative" rejections under §103(a) for unpatentability over Aoki combined with Moser and Kuramoto '580, and over Takahashi combined with Moser and Kuramoto '580 are similarly overcome because Kuramoto '580, essential to those rejections, is not a reference.

The remaining grounds of rejection of claims 1 - 7 under §103(a) are as follows:

- (1) Elsermans combined with Iwasaki¹ and further combined with Kuramoto '478 in the rejection of claims 4 and 5;
- (2) Iwasaki combined with McNally and Moser, with which Kuramoto '478 is further combined against claims 4 and 5;
- (3) Aoki combined with Moser and Iwasaki, with which Kuramoto '478 is further combined against claims 4 and 5;
- (4) Takahashi combined with Moser and Iwasaki, with which Kuramoto '478 is further combined against claims 4 and 5; and

¹In applying Iwasaki, the Office Action refers to certain Chemical Abstract registry numbers and another publication as establishing that the yellow, magenta and cyan toners identified by Iwasaki meet the recitals of applicants' claim 1. For brevity, these additional citations are not mentioned in the following discussion, but it is to be understood that reference herein to "Iwasaki" means Iwasaki as evidenced by the additional citations.

(5) Hata combined with Moser and Iwasaki, with which Kuramoto '478 is further combined against claims 4 and 5.

The last three grounds of rejection are characterized as cumulative in numbered paragraph 13 on p. 18 of the aforesaid Office Action.

In response to these five grounds of rejection, applicants again submit that claim 1, and claims 2 - 7, dependent on claim 1, distinguish patentably over the applied references, however combined, essentially for the reasons set forth in their First Reply to Final Rejection mailed March 27, 2003, viz., that even assuming *arguendo* that claim 1 is *prima facie* obvious over one or more of the asserted combinations of references, nevertheless the claimed novel combination of method features achieves an unobvious and unexpected beneficial result that is entitled to patentable weight.

To recapitulate briefly applicants' position as set forth in responses to previous Office Actions:

Claim 1 (directed to a method of forming a full color image) is expressly limited to the following combination of features:

- (a) non-contact fixing;
- (b) use of specified yellow, magenta and cyan colorants, and
- (c) positioning the yellow color toner images closer to the receiving material than any other color toner image.

As applicants' specification explains (p. 2, lines 14-23), problems concerning color reproducibility have heretofore been encountered when non-contact fixing methods have been used, and in addition, "the color toner images generally have poor light resistance." The specification further sets forth (p. 6, lines 23-27) that use of the specific set of yellow, magenta and cyan colorants of feature (b) above, with non-contact fixing (feature (a)), in accordance with the invention, "can produce color images having better image qualities than conventional color toners,"

although "the image qualities of the color images are inferior to those of the color images fixed by a roller fixing method." When, in addition, feature (c) is provided -- i.e., when the yellow toner image has the lowest position in color toner images overlaid on a receiving material -- "the image qualities [with non-contact fixing] are as good as those of the color toner images fixed by a roller fixing method" (specification, p. 7, lines 1-7).

This beneficial result is demonstrated by the Examples and Comparative Examples of applicants' specification, all of which employ non-contact fixing. Examples 1 - 4 are examples of the invention defined in claim 1. Comparative Example 1 uses the same set of toners as feature (b) of the invention but does not place the yellow toner image closest to the receiving material. Comparative Examples 2 and 3 do have the yellow image lowermost but employ yellow and magenta colorants not included within feature (b) although they use the same blue colorant as feature (b). The data set forth in Table 1 of the specification and represented in FIGS. 1-3 of the drawings illustrate the clear superiority of the Examples of the invention over any of the Comparative Examples. Most particularly, they demonstrate the criticality of the combination of use of the specified toners and placing of the yellow toner image closest to the receiving material for the attainment of applicants' advantageous results for non-contact fixing.

In the latest Office Action, the Examiner asserts (p. 24) that applicants' showings are insufficient because, *inter alia*, they "have not shown that the non-contacting fixing step recited in instant claim 1 provides unexpectedly superior results over Iwasaki." But what applicants have shown is the superiority of their results, in terms of image qualities obtained with non-contact fixing, over non-contact fixing methods that do not employ the combination of features recited in claim 1. Thereby, the

invention enables the benefits of non-contact fixing to be realized without the drawbacks of inferior image qualities heretofore associated with non-contact fixing. This is in itself a beneficial result, which does not require any showing of better image quality than contact fixing methods using the same toners and order of arrangement of the images; and it is unexpected, since none of the references suggests that the combination of features recited in claim 1 could overcome or mitigate the image quality problems of non-contact fixing.

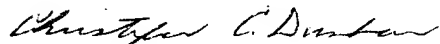
The Examiner also asserts that applicants' results appear to be expected from Kuramoto '580. But as explained above, Kuramoto '580 cannot be relied on to show that "the results in the specification do not appear to be unexpected" as the aforesaid Office Action (at p. 23) asserts, because Kuramoto '580 is not prior art as to any claim.

In response to the Examiner's continuing position that the showing of unexpected results in the Examples and Comparative Examples in applicants' specification "is not commensurate in scope with the instant claims because instant examples 1-4 comprise combinations of preferred embodiments that are recited in dependent claims 2-7" and not in claim 1, applicants once more submit that the same "preferred" features of claims 2-7 are present in the Comparative Examples of the specification. Thus, as between the Examples of the invention and the Comparative Examples, there is no "welter of unconstrained variables"; only the toner compositions and order of images - the features characterizing claim 1 - are varied as between the Examples and Comparative Examples, while other factors including the "preferred" features are held the same, affording a true and proper comparison.

New claim 25 combines all the features of claims 2 - 7 with those of claim 1, on which it depends. Thus, the Examples of the specification are submitted to satisfy in all respects the Examiner's criteria for scope commensurate with claim 25. Allowability of claim 25 is of course also predicated on its dependence from claim 1.

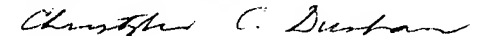
For the foregoing reasons, it is believed that claim 1, and claim 2 - 7 and 25 dependent thereon, are allowable. Favorable action thereon is accordingly courteously requested.

Respectfully,



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I hereby certify that this paper is being deposited this date with the U.S. Postal Service as first class mail addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.


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